AMENDMENTS TO THE CLAIMS:

Please cancel claims 2-10, 13-15, 17-25, 27, 30, 31, 37, 46, 50, 56, 57, 62, 63, 67-75, 78-80, 87, 88 and 96-105 without prejudice, and amend claims 1, 16, 36, 51 and 66 as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

Claim 1 (currently amended). A method for the production of a metal ~~or metal alloy~~ of interest which comprises electrochemically reducing an anode formed of a composite of a metal oxide of the metal of interest with carbon in a molten salt electrolyte, wherein the anode is formed of a titanium oxide-or titanium suboxide-carbon composite and the metal produced comprises titanium, the anode is formed of a chromium oxide-carbon composite and the metal produced comprises chromium, the anode is formed of a hafnium oxide-carbon composite and the metal produced comprises hafnium, the anode is formed of a molybdenum oxide-carbon composite and the metal produced comprises molybdenum, the anode is formed of a niobium oxide-carbon composite and the metal produced comprises niobium, the anode is formed of a tantalum oxide-carbon composite and the metal produced comprises tantalum, the anode is formed of a tungsten oxide-carbon composite and the metal produced comprises tungsten, the anode is formed of a vanadium oxide-carbon composite and the metal produced comprises vanadium, or the anode is formed of a zirconium oxide-carbon composite and the metal produced comprises zirconium.

Claims 2-10 (canceled).

Claim 11 (original). The method of claim 1, wherein said molten salt electrolyte comprises a strong Lewis acid.

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Claim 12 (original). The method of claim 11, wherein the electrolyte is selected from the group consisting of an eutectic of sodium chloride, lithium chloride and potassium chloride, an eutectic of potassium fluoride, sodium fluoride and lithium fluoride, an eutectic of sodium chloride, calcium chloride and potassium chloride, an eutectic of sodium chloride, magnesium chloride and sodium fluoride, and an eutectic of sodium chloride, potassium chloride and sodium fluoride.

Claims 13-15 (canceled).

Claim 16 (currently amended). An electrolytic cell for production of a metal ~~or metal alloy~~ of interest, said cell comprising in combination:

a molten salt electrolyte disposed in a cell, said electrolyte comprising a strong Lewis acid; and

a cathode and an anode in contact with said electrolyte, wherein said anode is formed of a composite of an oxide of the metal of interest and carbon[[.]], wherein the anode is formed of a titanium oxide-or titanium suboxide-carbon composite and the metal produced comprises titanium, the anode is formed of a chromium oxide-carbon composite and the metal produced comprises chromium, the anode is formed of a hafnium oxide-carbon composite and the metal produced comprises hafnium, the anode is formed of a molybdenum oxide-carbon composite and the metal produced comprises molybdenum, the anode is formed of a niobium oxide-carbon composite and the metal produced comprises niobium, the anode is formed of a tantalum oxide-carbon composite and the metal produced comprises tantalum, the anode is formed of a tungsten oxide-carbon composite and the metal produced comprises tungsten, the anode is formed of a vanadium oxide-carbon composite and the metal produced comprises

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vanadium, or the anode is formed of a zirconium oxide-carbon composite, and the metal produced comprises zirconium.

Claims 17-25 (canceled).

Claim 26 (original). The cell of claim 16, wherein the electrolyte is selected from the group consisting of an eutectic of sodium chloride, lithium chloride and potassium chloride, an eutectic of potassium fluoride, sodium fluoride and lithium fluoride, an eutectic of sodium chloride, calcium chloride and potassium chloride, an eutectic of sodium chloride, magnesium chloride and sodium fluoride, and an eutectic of sodium chloride, potassium chloride and sodium fluoride.

Claim 27 (canceled).

Claim 28 (original). The cell of claim 16, and further comprising a source of electric current connected to said cell.

Claim 29 (original). The cell of claim 28, wherein said source of electric current is connected to said cell via a current controller.

Claims 30-31 (canceled).

Claim 32 (original). The cell of claim 16, wherein the anode comprises loose pieces of said metal oxide carbon composite contained within a porous basket disposed in said electrolyte.

Claim 33 (original). The cell of claim 16, and further comprising a valved outlet adjacent a lower wall thereof.

Claim 34 (original). The cell of claim 16, and further comprising a separator or diaphragm disposed between said anode and cathode.

Claim 35 (original). The cell of claim 34, wherein the separator or diaphragm comprises porous alumina.

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Claim 36 (currently amended). An anode for use in a molten salt electrolytic cell for electrolytic production of a metal ~~or metal alloy~~ of interest comprising a composite of an oxide of the metal of interest with carbon, wherein the metal of interest comprises a multi-valence or high valence metal or metal alloy.

Claim 37 (currently amended). The anode of claim 36, comprising a titanium ~~oxide or~~ oxide-or titanium suboxide-carbon composite.

Claim 38 (original). The anode of claim 36, comprising a chromium oxide-carbon composite.

Claim 39 (original). The anode of claim 36, comprising a hafnium oxide-carbon composite.

Claim 40 (original). The anode of claim 36, comprising a molybdenum oxide-carbon composite.

Claim 41 (original). The anode of claim 36, comprising a niobium oxide-carbon composite.

Claim 42 (original). The anode of claim 36, comprising a tantalum oxide-carbon composite.

Claim 43 (original). The anode of claim 36, comprising a tungsten oxide-carbon composite.

Claim 44 (original). The anode of claim 36, comprising a vanadium oxide-carbon composite.

Claim 45 (original). The anode of claim 36, comprising zirconium oxide-carbon composite.

Claim 46 (canceled).

Claim 47 (original). A molten salt electrolyte comprising a eutectic of sodium chloride, lithium chloride and potassium chloride.

Claim 48 (original). A molten salt electrolyte comprising an eutectic of potassium fluoride, sodium fluoride and lithium fluoride.

Claim 49 (original). A molten salt electrolyte comprising an eutectic of sodium chloride, calcium chloride and potassium chloride.

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Claim 50 (currently amended). A metal ~~or metal alloy~~ produced by the process of claim 1 in particulate, flake or solid form.

Claim 51 (currently amended). A metal ~~or metal alloy~~ as claimed in claim 50, wherein the metal produced is selected from the group consisting of titanium, chromium, hafnium, molybdenum, niobium, tantalum, tungsten, vanadium[[,]]and zirconium ~~and an alloy of one or more of said metals~~.

Claim 52 (original). An anode for use in a molten salt electrolytic cell for electrolytic production of titanium comprising a titanium suboxide - carbon composite.

Claim 53 (original). The anode as claimed in claim 52 wherein the titanium suboxide comprises TiO or Ti_2O_3.

Claim 54 (original). A method for the production of purified titanium from rutile ore which comprises electrowinning from an anode formed of a mixture of titanium suboxide/carbon composite in a molten salt electrolyte.

Claim 55 (original). The method of claim 54, wherein the molten salt electrolyte is selected from the group consisting of an eutectic of sodium chloride, lithium chloride and potassium chloride, an eutectic of potassium fluoride, sodium fluoride and lithium fluoride, an eutectic of sodium chloride, calcium chloride and potassium chloride, an eutectic of sodium chloride, magnesium chloride and sodium fluoride, and an eutectic of sodium chloride, potassium chloride and sodium fluoride.

Claims 56-57 (canceled).

Claim 58 (original). The method of claim 54, wherein titanium suboxide is mixed with carbon in a ratio of at least 1:1.5 over stoichiometry.

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Claim 59 (original). The method of claim 54, wherein the titanium suboxide is mixed with carbon in a ratio of at least 1.1 over stoichiometry.

Claim 60 (original). A method for the production of purified titanium which comprises electrochemically reducing an anode formed of a titanium suboxide/carbon composite in a molten salt electrolyte.

Claim 61 (original). The method of claim 60, wherein the molten salt electrolyte is selected from the group consisting of an eutectic of sodium chloride, lithium chloride and potassium chloride, an eutectic of potassium fluoride, sodium fluoride and lithium fluoride, an eutectic of sodium chloride, calcium chloride and potassium chloride, an eutectic of sodium chloride, magnesium chloride and sodium fluoride, and an eutectic of sodium chloride, potassium chloride and sodium fluoride.

Claims 62-63 (canceled).

Claim 64 (original). The method of claim 60, wherein titanium suboxide is mixed with carbon in a ratio of at least 1:1.5 over stoichiometry based on titanium.

Claim 65 (original). The method of claim 60, wherein the titanium suboxide is mixed with carbon in a ratio of at least 1.1 over stoichiometry based on titanium.

Claim 66 (currently amended). A method for the direct production of a metal ~~or metal alloy~~ of interest in a particulate state which comprises subjecting an anode, formed of a composite of a metal oxide of the metal of interest with carbon, to electrolytic reduction in a cell containing a molten salt electrolyte,[[.]] wherein the anode is formed of a titanium oxide-or titanium suboxide-carbon composite and the metal produced comprises titanium, the anode is formed of a chromium oxide-carbon composite and the metal produced comprises chromium, the anode is formed of a hafnium oxide-carbon composite and the metal produced comprises hafnium, the

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anode is formed of a molybdenum oxide-carbon composite and the metal produced comprises molybdenum, the anode is formed of a niobium oxide-carbon composite and the metal produced comprises niobium, the anode is formed of a tantalum oxide-carbon composite and the metal produced comprises tantalum, the anode is formed of a tungsten oxide-carbon composite and the metal produced comprises tungsten, the anode is formed of a vanadium oxide-carbon composite and the metal produced comprises vanadium, or the anode is formed of a zirconium oxide-carbon composite, and the metal produced comprises zirconium.

Claims 67-75 (canceled).

Claim 76 (original). The method of claim 66, wherein said molten salt electrolyte comprises a strong Lewis acid.

Claim 77 (original). The method of claim 76, wherein the electrolyte is selected from the group consisting of an eutectic of sodium chloride, lithium chloride and potassium chloride, an eutectic of potassium fluoride, sodium fluoride and lithium fluoride, an eutectic of sodium chloride, calcium chloride and potassium chloride, an eutectic of sodium chloride, magnesium chloride and sodium fluoride, and an eutectic of sodium chloride, potassium chloride and sodium fluoride.

Claims 78-80 (canceled).

Claim 81 (original). A process for purification of rutile which comprises reacting rutile with carbon at an elevated temperature under an inert atmosphere.

Claim 82 (original). The method of claim 81, wherein the temperature is in excess of 1200°C.

Claim 83 (original). The method of claim 82, wherein the temperature is between 1200°C and 1850°C.

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Claim 84 (original). The method of claim 81, further comprising the steps of forming said purified rutile into an electrode and employing the resulting electrode in electrolytic process to produce purified titanium.

Claim 85 (original). The method of claim 60, wherein titanium suboxide-carbon composite anode is formed by heating a titanium oxide with carbon under an inert atmosphere.

Claim 86 (original). A method of production of purified titanium which comprises electrowinning titanium oxide in a molten salt of calcium fluoride at elevated temperature.

Claims 87-88 (canceled).

Claim 89 (original). The method according to claim 66, wherein the electrode is formed of a titanium oxide/carbon composite, and including the step of adding a Ti^{+2} containing compound to the electrolyte.

Claim 90 (original). The method of claim 89, wherein the Ti^{+2} containing compound is added in a concentration of ½ to 20 % by weight of the electrolyte.

Claim 91 (original). The method of claim 90, wherein the Ti^{+2} containing compound is added in a concentration of 1 to 10 % by weight of the electrolyte.

Claim 92 (original). The method according to claim 60, wherein the anode comprises a composite of titanium suboxide and carbon, and including the step of adding a Ti^{+2} containing compound to the electrolyte.

Claim 93 (original). The method of claim 66, wherein the electrolyte includes a Ti^{+3} containing compound which is reduced in one step to titanium metal.

Claim 94 (original). The method of claim 93, wherein the Ti^{+2} containing compound is added in a concentration of ½ to 20 % by weight of the electrolyte.

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Claim 95 (original). The method of claim 94, wherein the Ti^{+2} containing compound is added in a concentration of 1 to 10 % by weight of the electrolyte.

Claims 96-105 (canceled).

Claim 106 (original). A molten salt electrolyte comprising a mixture of fluorine salt and a chlorine salt in a fluorine/chlorine ratio of at least 0.1 for use in producing titanium by electrowinning.

Claim 107 (original). A method for the production of titanium metal which comprises electrochemically reducing a cathode formed of a titanium suboxide-carbon composite in a fused salt electrolyte.

Claim 108 (original). The method of claim 107, wherein the fused salt electrolyte comprises calcium chloride.

Claim 109 (original). The method of claim 108, wherein the fused salt electrolyte contains calcium oxide.

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